HCIN 5200F (Fall, 2025) – Software and User Interface Development

School of Computer Science, Carleton University
Course Outline

Instructor: Edward Melcer

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Office Location: Room 5356, Herzberg Building

Best Ways to be in Touch: In class, via email, via class discord, or during student hours.

Teaching Assistant: A list of teaching assistants and their contact/office hours information will be posted once the course starts if applicable.

Class Location: Please check Carleton Central for the room location.

Lecture Times: W, 2:35 pm - 5:25 pm

Course Website:
https://brightspace.carleton.ca/d2l/home/370397

Brightspace Access for University of Ottawa Students:
https://gradstudents.carleton.ca/faculty-of-graduate-and-postdoctoral-affairs-access-to-brightspace/

Important dates and deadlines can be found here: https://carleton.ca/registrar/regulations/, including class suspension for fall, winter breaks, and statutory holidays.

Course Calendar Description

Software and User Interface Development

Design and development of user interfaces for software systems based on principles for supporting user interaction, with emphasis on frameworks, tools, and processes for user interface development.

Learning Material(s) and Other Course-Related Resources

Students are not required to purchase textbooks or other learning materials for this course.

Welcome

I am excited to welcome you to HCIN 5200F: Software and User Interface Development. In this class, we will explore the foundations and essential aspects of software interfaces and user interaction. In this outline, you will find how this class will be run. For this class, you will learn a variety of exciting topics that will empower you to design and develop usable and effective user interfaces, as well as create valuable samples for your portfolios. By taking this course, you will also develop the fundamental skills and knowledge needed to conduct user studies and human-computer interaction research.

I also welcome you to contact me outside of class and office hours. You may send me a message on discord, email me, or chat directly in the hallways or at my office between classes. My door is always open, and I encourage you to reach out with your questions, enthusiasm, or whatever needs I can address!

Learning Outcomes

The objective of this class is to give students fundamental knowledge of and practical experience with user interface development.

Specifically, if successful, students will be able to:

- Understand, present, and discuss papers on user interaction from the HCI literature, identifying the key ideas, their justification and implications
- Understand, compare, and apply the major computer interface style frameworks, their rationale, advantages and disadvantages
- Design and prototype user interfaces that leverage different styles, design patterns, and interaction paradigms
- Conduct research related to human-computer interaction and write up results

Topics Covered (Tentative, will be finalized the first week of class)

Week	Class	Topic
1	9/3	Introduction to HCI and Design
2	9/10	UI Design Styles
3	9/17	Prototyping
4	9/25	Interaction Design, Design Patterns, and Visual Design
5	9/30	Technical Writing Workshop
6	10/9	Mobile Interaction

7	10/14	Gestures
8	10/21	Fall Break – No Classes
9	10/28	User Studies
10	11/4	Designing for Social Interaction
11	11/11	Accessibility
12	11/20	Software Development
13	11/25	Project Presentations
14	12/3	Project Presentations

Assessment Scheme

Grade Breakdown

Component	Grade Weight
Participation and Discussion	10%
Written Reading Responses	10%
Reading Discussion Lead	10%
Design and Prototyping Assignment	20%
Project Plan	10%
Project	30%
Project Presentation	10%

Assessments

- **Participation and Discussion** – Attending each class as well as participating in class discussions, workshops, and other activities.
- **Written Reading Responses** – A one-page reading response on assigned weekly readings that is submitted **before** the start of class each week
- **Reading Discussion Lead** – Students will take turns providing a brief summary and leading the discussion on weekly reading papers throughout the term.
- **Design and Prototyping Assignment** – Students will design and create two prototypes to address the same underlying design problem, but employ distinct design approaches for each (e.g., different interaction styles and design patterns).
- **Project Plan** – Students will submit a written project plan that provides a high-level overview of their proposed final project.
- **Project** – Projects can be either a research project or literature review, and the submitted project will take the form of an academic paper.

- **Project Presentation** – Students will present their project to the class. Presentations should cover the 1) main research question, gap, or issue being addressed, 2) the motivation for the work and relevance to HCI, and 3) the plan, results, and contributions of the work.

Grading
In accordance with Carleton University Calendar Regulations, the letter grades assigned in this course will have the following percentage equivalents:

A+ = 90-100	A = 85-89	A- = 80-84
B+ = 77-79	B = 73-76	B- = 70-72
C+ = 67-69	C = 63-66	C- = 60-62
D+ = 57-59	D = 53-56	D- = 50-52
F = <50		

WDN = Withdrawn from the course; DEF = Deferred; FND = (Failed, no Deferred)

Late and Missed Work Policies

Late Work
Assignments should be submitted by the given due date. You are allowed to submit one late assignment during the semester, as long as it is within one week of the given deadline. There is no need to contact anyone and you will not lose any points. Any subsequent late assignment will lose 10% from the total grade for each day that it is late.

Missed Work

If you would like to request a deferral for an assignment/project deadline (apart from the one-time assignment extension available to everyone), please contact your TA and instructor on a single email and fill in the academic considerations form no later than three working days after the work was due. You will then be informed about the next steps. Note that this should only be used for short-term concerns; if you are experiencing chronic, ongoing challenges, please follow the above steps but fill out the longer-term considerations form instead. Please also consider reaching out to the Paul Menton Centre and/or the Care Support team.

Communication

- Please ask all questions related to lecture material, course policies, assignments, and projects using the appropriate discussion forums on Brightspace or Discord
- You are also encouraged to attend office hours to ask questions or discuss further

- Email your TA if there is a matter related to an assignment or project grade; please do not post these to a forum. Any deferral requests (see Deferral section below) should also be communicated by email
- Email your instructor in the case of confidential information or personal matters

Respect and Inclusion

The course instructor and TA in this course are committed to fostering an environment for learning that is inclusive for everyone. All students in the class, the instructor, and any guests should be treated with respect during all interactions—including any communications in class, through email, during office hours, or on any forum. It is my hope that our class will support diversity of experience, thought, and perspective.

School of Computer Science Laptop Requirement

Every student that has been enrolled in a 1000-level (i.e., first year) course offered by the School of Computer Science after the 2020/2021 school year is required to have a laptop. This includes COMP1001, COMP1005, and COMP1006. For more information, please visit https://carleton.ca/scs/scs-laptop-requirement/ and then review the requirements at https://carleton.ca/scs/scs-laptop-requirement/laptop-specs/.

Graduate Academic Advisors

The Graduate Advisors for the School of Computer Science are available in Room 5302 HP or by email at grad.scs@carleton.ca. The graduate advisors can assist with understanding your academic audit and the remaining courses required to meet graduation requirements.

SCS Computer Laboratory

Students taking a COMP course can access the SCS computer labs. The lab schedule and location can be found at: https://carleton.ca/scs/tech-support/computer-laboratories/. All SCS computer lab and technical support information can be found at: https://carleton.ca/scs/tech-support/. Technical support staff may be contacted in-person or virtually, see this page for details: https://carleton.ca/scs/tech-support/contact-it-support/.

Assistance for Students and Resources

Carleton Wellness: https://wellness.carleton.ca/

Career Services: https://carleton.ca/career/

Writing Services: https://carleton.ca/csas/support/

Peer Assisted Study Sessions (PASS): https://carleton.ca/csas/group-support/pass/

Math Tutorial Centre: https://carleton.ca/math/math-tutorial-centre/

Science Student Success Centre: https://sssc.carleton.ca/

Academic Accommodations and Regulations

Academic Accommodation

Carleton is committed to providing academic accessibility for all individuals. You may need special arrangements to meet your academic obligations during the term. The accommodation request processes are outlined on the Academic Accommodations website (https://students.carleton.ca/course-outline/).

Chat GPT/Generative AI Usage

As our understanding of the uses of AI and its relationship to student work and academic integrity continue to evolve, students are required to discuss their current and potential use of AI in any circumstance not described here with the course instructor to ensure it supports the learning goals for the course.

Academic Integrity

Students are expected to uphold the values of academic Integrity, which include fairness, honesty, trust, and responsibility. Examples of actions that compromise these values include but are not limited to plagiarism, accessing unauthorized sites for assignments or tests, unauthorized collaboration on assignments or exams, and using artificial intelligence tools such as ChatGPT when your assessment instructions say it is not permitted.

If you are unsure of the expectations regarding academic Integrity (how to use and cite references, if unauthorized collaboration with lab- or classmates is permitted (and, if so, to what degree), then you must ASK your instructor. Sharing assignments or quiz specifications as well as posting them online to sites like Chegg, CourseHero, OneClass, and so forth is ALWAYS considered academic misconduct.

Misconduct in scholarly activity will not be tolerated and will result in consequences as outlined in Carleton University's Academic Integrity Policy. A list of standard sanctions in the Faculty of Science can be found here.

Additional details about this process can be found on the Faculty of Science Academic Integrity website.

Students are expected to familiarize themselves with and abide by Carleton University's Academic Integrity Policy.

Student Rights & Responsibilities

Students are expected to act responsibly and engage respectfully with other students and members of the Carleton and the broader community. See the 7 Rights and Responsibilities Policy for details regarding the expectations of non-academic behaviour of students. Those who participate with another student in the commission of an infraction of this Policy will also be held liable for their actions.

Student Concerns

If you have any concerns regarding this course, your first point of contact is me. Please email me or visit during my student hours, and I will do my best to address your concerns. If I cannot resolve the issue, the next point of contact is the School of Computer Science at studentconcerns@scs.carleton.ca. If the concern remains unresolved, the final point of contact is the Office of the Dean of Science at ODScience@carleton.ca. Please follow this order of contact. **Note:** You can also bring your concerns to Ombuds services.

Land acknowledgement

Here at Carleton University, it is important that we acknowledge that the land on which we gather is the traditional and unceded territory of the Algonquin nation.

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